

## Claims

- [c1] WHAT IS CLAIMED IS:
1. A machine for machining workpieces (3) of wood or plastic material, the machine comprising:  
at least one longitudinal profiling unit (2) comprising at least one longitudinal profiling spindle;  
at least one advancing unit (15) configured to move a workpiece (3) past the at least one longitudinal profiling unit (2);  
wherein the at least one advancing unit (15) has upper clamping jaws (54) arranged above the workpiece (3) and lower clamping jaws (55) arranged below the workpiece (3) such that at least some of the upper clamping jaws (54) are staggered relative to the lower clamping jaws (55), when viewed in a plan view onto the advancing unit (15); and  
wherein a small free space is provided between the upper and lower clamping jaws (54, 55), when viewed in a plan view.
  - [c2] 2. The machine according to claim 1, wherein the upper and lower clamping jaws (54, 55) are arranged in a row, respectively, on the at least one advancing unit (15).
  - [c3] 3. The machine according to claim 1, further comprising a drive (53) acting on at least some of the upper clamping jaws (54) for adjusting the upper clamping jaws (54).
  - [c4] 4. The machine according to claim 3, wherein the upper clamping jaws (54) are individually adjustable.
  - [c5] 5. The machine according to claim 3, further comprising carriers (59) connected to the drive (53), wherein the upper clamping jaws (54) are positioned on the carriers (59), respectively.
  - [c6] 6. The machine according to claim 3, wherein the drive (53) comprises lifting cylinders (56) configured to adjust the carriers (59).
  - [c7] 7. The machine according to claim 1, further comprising at least one lifting cylinder (72) for adjusting the lower clamping jaws (55).

- [c8] 8. The machine according to claim 1, wherein the upper and lower clamping jaws (54, 55), viewed in a plan view, have a complementary contour shape.
- [c9] 9. The machine according to claim 1, wherein the at least one advancing unit (15) comprises stops (46) provided across a length of the at least one advancing unit (15), wherein a longitudinal side of the workpiece (3) rests against the stops (46).
- [c10] 10. The machine according to claim 9, further comprising at least one support (62) on which the stops (46) are supported.
- [c11] 11. The machine according to claim 10, wherein the at least one support (62) is adjustable transversely to a transport direction of the workpiece (3).
- [c12] 12. The machine according to claim 10, wherein the at least one support (62) is rake-shaped.
- [c13] 13. The machine according to claim 9, wherein the stops (46) are moveable into a lowered position against a counter force.
- [c14] 14. The machine according to claim 13, wherein the stops (46) are positioned in a movement path of the upper clamping jaws (54).
- [c15] 15. The machine according to claim 14, wherein the stops (46) are moveable by the upper clamping jaws (54) into the lowered position.
- [c16] 16. The machine according to claim 10, further comprising carriers (59) connected to the drive (53), wherein the upper clamping jaws (54) are positioned on the carriers (59), respectively, and wherein the carriers (59) project through the at least one support (62) of the stops (46).
- [c17] 17. The machine according to claim 1, wherein the advancing unit (15) has at least one carrier (47) movable along at least one guide (50, 51) of the machine.
- [c18] 18. The machine according to claim 1, further comprising at least one transverse profiling unit (1) arranged upstream of the longitudinal profiling unit (2) and at least one transfer unit (36) provided in a transfer area between the transverse profiling unit (1) and the longitudinal profiling unit (2).

- [c19] 19. The machine according to claim 18, wherein the transfer unit (36) has two guides (37, 38) positioned at a spacing one above the other.
- [c20] 20. The machine according to claim 19, wherein the guides (37, 38) are endless circulating belts.
- [c21] 21. The machine according to claim 19, wherein the at least one transfer unit (36) has support elements (39, 40) and wherein the guides (37, 38) are arranged on one of the support elements (39, 40), respectively.
- [c22] 22. The machine according to claim 21, wherein at least one of the support elements (39, 40) is adjustable relative to the other support element.
- [c23] 23. The machine according to claim 18, wherein the at least one transfer unit (36) is vertically adjustable relative to the advancing unit (15).
- [c24] 24. The machine according to claim 18, further comprising at least one intermediate clamping device (33) arranged in the transfer area between the transverse profiling unit (1) and the longitudinal profiling unit (2).
- [c25] 25. The machine according to claim 24, wherein the intermediate clamping device (33) has clamping jaws (34, 35).
- [c26] 26. The machine according to claim 18, wherein the transverse profiling unit (1) has at least one clamping device (4) for the workpieces (3).
- [c27] 27. The machine according to claim 26, wherein the clamping device (4) has an upper clamping jaw (26) and a lower clamping jaw (25).
- [c28] 28. The machine according to claim 27, wherein the lower clamping jaw (25) is pivotable about an axis (32) relative to the upper clamping jaw (26) into a release position.
- [c29] 29. The machine according to claim 27, wherein the lower clamping jaw (25) has a free end provided with at least one stop (31) for the workpiece (3).
- [c30] 30. The machine according to claim 26, further comprising a carriage (5) on which the clamping device (4) is supported.

- [c31] 31.The machine according to claim 26, wherein the clamping device (4) or at least the upper and lower clamping jaws (25, 26) of the clamping device are pivotable about a vertical axis (6).
- [c32] 32.The machine according to claim 26, wherein the clamping device (4) is adjustable transversely to a transport direction of the workpiece (3) in the transverse profiling unit (1).
- [c33] 33. The machine according to claim 18, further comprising at least one transport unit (77) configured to transport the workpieces (3) from the transfer unit (36) into the advancing unit (15).
- [c34] 34.The machine according to claim 33, wherein the at least one transport unit (77) is arranged in the transfer area between the transverse profiling unit (1) and the longitudinal profiling unit (2).
- [c35] 35.The machine according to claim 33, wherein the transport unit (77) comprises pressing jaws (79) positioned at a spacing relative to one another.
- [c36] 36. The machine according to claim 35, wherein the pressing jaws (79) have a curved contact side.
- [c37] 37. The machine according to claim 1, wherein the at least one longitudinal profiling unit (2) has at least two advancing units (15) correlated therewith, wherein the at least two advancing units (15) are arranged mirror-symmetrical to one another.
- [c38] 38. The machine according to claim 37, wherein the upper and lower clamping jaws (54, 55) are arranged on each one of the at least two advancing units (15), respectively.
- [c39] 39.The machine according to claim 38, wherein at least some of the upper and lower clamping jaws (54, 55) are staggered relative to one another with a small free space therebetween, when viewed in a plan view.
- [c40] 40.The machine according to claim 37, wherein the at least two advancing units (15) are positioned adjacent to one another in a transport direction of the

workpieces (3).

- [c41] 41.The machine according to claim 38, wherein the upper and lower clamping jaws (54, 55) of the at least two advancing units (15) are oriented against one another.
- [c42] 42.The machine according to claim 38, wherein the at least two advancing units (15) are arranged adjacent to one another in a transfer area (80) in which the upper and lower clamping jaws (54, 55) of the at least two advancing units (15) engage the same workpiece (3).
- [c43] 43.The machine according to claim 37, further comprising a common machine part (81), wherein the at least two advancing units (15) are guided on the common frame part (81).
- [c44] 44. The machine according to claim 1, wherein the at least one advancing unit (15) comprises a drive configured as a CNC axis.
- [c45] 45.The machine according to claim 1, wherein the at least one advancing unit (15) comprises suction clamping devices (54) for clamping wide workpieces (3).  
46.
- [c46] 46. The machine according claim 1, wherein the upper clamping jaws (54) form a part of the suction clamping devices.
- [c47] 47. A method for machining workpieces (3) in a machine, wherein the machine has at least one longitudinal profiling unit (2) with at least one longitudinal profiling spindle and at least one advancing unit (15) configured to move a workpiece (3) past the at least one longitudinal profiling unit (2), wherein the at least one advancing unit (15) has upper clamping jaws (54) arranged above the workpiece (3) and lower clamping jaws (55) arranged below the workpiece (3) such that at least some of the upper clamping jaws (54) are staggered relative to the lower clamping jaws (55), when viewed in a plan view onto the advancing unit (15), and wherein a small free space is provided between the upper and lower clamping jaws (54, 55), when viewed in a plan view, wherein the workpieces (3) are clamped in the at least one advancing unit (15) and

transported together with the at least one advancing unit (15) through the machine; the method comprising the steps of:

clamping the workpieces (3) from above and below in the at least one advancing unit (15); and

transferring the workpieces (3) between different machining actions while remaining clamped at all times during transfer.

- [c48] 48.The method according to claim 47, further comprising the step of machining the workpieces (3) on at least one longitudinal side.
- [c49] 49. The method according to claim 48, wherein the workpieces (3) during the step of machining of the at least one longitudinal side are drilled by at least one stationary drilling unit (16).
- [c50] 50.The method according to claim 47, further comprising the step of machining the workpieces (3), while clamped from above and from below by the at least one advancing unit (15) , in a first pass through the machine on a first end face (86) and on a first longitudinal side and in a second pass through the machine on a second end face (96) and on a second longitudinal side.
- [c51] 51. The method according to claim 50, wherein the step of machining comprises the steps of:  
returning the at least one advancing unit (15) into an initial position after completion of the first pass;  
removing the workpiece (3) from the at least one advancing unit (15);  
turning the workpiece (3) by 180 ° ;  
clamping the workpiece (3) again in the at least one advancing unit (15); and  
moving the at least one advancing unit (15) through the machine for performing the second pass.
- [c52] 52.The method the machine according to claim 50, wherein the step of machining comprises the steps of:  
clamping the workpiece (3) in a first advancing unit (15);  
moving the workpiece in the first advancing unit (15) through the machine for performing the first pass;

transferring the workpiece (3) onto a second advancing unit (15);  
transporting the workpiece (3) on the second advancing unit (15) through the machine for performing the second pass.

[c53] 53.The method according to claim 52, wherein the workpiece (3) always remains fixedly clamped during transfer from the first advancing unit to the second advancing unit (15).

[c54] 54.The method according to claim 52, wherein the workpiece (3) is transported in the same transport direction (21) through the machine by the first and second advancing units (15).

[c55] 55.The method according to claim 52, wherein the workpiece (3) is transported through the machine by the second advancing unit (15) in a transport direction opposite to a transport direction of the first advancing unit (15).

[c56] 56. The method according to claim 47, wherein in the step of clamping the workpieces (3) are secured by suction.